

REMARKS/ARGUMENTS

Applicants respectfully request reconsideration and allowance of this application in view of the amendments above and the following comments.

Claim 1 has been amended to specify the interfacial tension in accordance with the fourth paragraph on page 13 of the specification. Applicants do not believe the amendment to claim 1 introduces any new matter. An early notice to that effect is earnestly solicited.

Applicants will shortly submit an information disclosure statement including documents that show:

- 1) The correlation and intimate link between the thermodynamic stability of microemulsions and the low interfacial tension [Kahlwelt et al., 1990, “Microemulsions: A qualitative thermodynamic approach” (c.f. e.g. eq VII.I and Fig. 19)].
- 2) The inseparable connection between the minimum of the already extremely low interfacial tensions and the bicontinuous structure of microemulsions [Strey, 1994, “Microemulsions microstructure and interfacial curvature” (c.f. Fig. 3 and 13)].
- 3) A wealth of numerical values for low and minimum interfacial tensions of bicontinuous microemulsions (ranging from 10^{-4} to 10^{-1} mN/m) in conjunction with the characteristic size of the nanostructure (ranging 100nm to 5.1nm) [Sottmann et al., 1997, “Ultralow interfacial tensions in water-alkane-surfactant systems” (c.f. Table II)].

Thus, the interfacial tension value defines the stabilizing characteristics of bicontinuous microemulsions. A bicontinuous microemulsion having the interfacial

tension values and, thus, the stabilizing characteristics, of that claimed is nowhere taught nor suggested in the cited prior art.

Claims 1-9, 14, 15 and 18 were rejected under 35 USC § 102(e) as being anticipated by Varadaraj et al. (“Varadaraj I”), US 2003/0170512.

Claims 1-9, 15 and 18 were rejected under 35 USC § 102(e) as being anticipated by Varadaraj et al. (“Varadaraj II”), US 2003/0165722.

Claims 1-9, 15, 17 and 18 were rejected under 35 USC § 102(b) as being anticipated by Jakobs et al. (“Jakobs”), Langmuir, 15: 6707-6711 (1999).

Claim 12 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Allgaier et al. (“Allgaier”), US 6,677,293.

Claim 10 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Steinmann, US 2003/3307484.

Claim 11 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Filippini et al. (“Filippini”), US 2002/0088167.

Claim 13 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I in view of Filippini and Steinmann, US 6,017,368.

Claim 19 was rejected under 35 USC § 103(a) as being obvious over Varadaraj I.

Claim 19 was rejected under 35 USC § 103(a) as being obvious over Jakobs.

Applicants respond to **all** of the foregoing rejections, both anticipation and obviousness, together.

The Examiner relies on inherency to show the claimed microemulsions are known in the prior art, or obvious therefrom. In response, Applicants respectfully point out that, if the Examiner relies on a theory of inherency as to any particular element, then the extrinsic evidence must make clear that such element is **necessarily** present in the thing described in the reference, and the presence of such element therein would be so recognized by persons skilled in the art. *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Further, inherency is not established by probabilities or possibilities, and the mere fact that a property may result from a given circumstances is not sufficient; instead it must be shown that such property **necessarily** inheres in the thing described in the reference. *Id.* The claims have been amended without prejudice to specify a particular interfacial tension and, thus, stabilizing characteristic, of the claimed microemulsions. The cited prior art does not teach this particular interfacial tension, nor would it have been obvious therefrom. Consequently, the cited prior art, whether taken alone or in the various cited combinations, cannot anticipate or render obvious any of the present claims.

For example, whereas the interfacial tensions range of the present claims is specified to be between 10^{-1} and 10^{-4} mN/m, the microemulsions of Varadaraj II have as lowest quoted value 0.78 mN/m (=0.78 dyne/cm), see Table I of Varadaraj II. The value in Varadaraj II is thus about **one order of magnitude larger** than the upper limit of the present claims. Thus, the Examiner's alleged thermodynamic stability of Varadaraj II's microemulsions is, in fact, unfounded and consequently, the present claims do not overlap with the emulsion of Varadaraj, or with other of the allegedly anticipatory references.

Further, regarding obviousness, nothing in the various combination of references teaches or suggests that the interfacial tension should be manipulated to within the presently claimed range.

The claimed microemulsions are thus neither anticipated nor rendered obvious by the cited prior art.

In view of the foregoing, Applicants respectfully request that the Examiner reconsider and withdraw all of the prior art rejections. An early notice that these rejections have been reconsidered and withdrawn is earnestly solicited.

Applicants believe that the foregoing constitutes a bona fide response to all outstanding objections and rejections.

Applicants also believe that this application is in condition for immediate allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Early and favorable action is earnestly solicited.

Respectfully submitted,

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